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Dairy Production

Issued Monthly by

AGRICULTURAL MARKETING SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

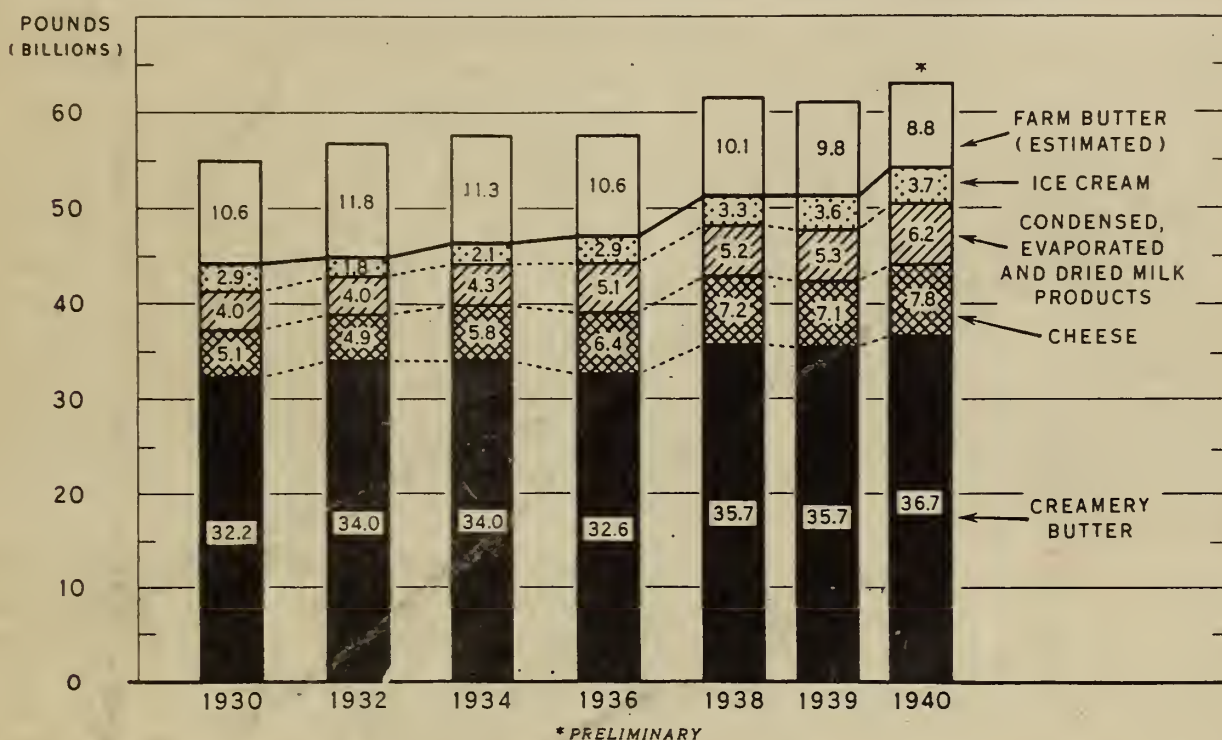


No. 20

A.M.S.

DECEMBER 15, 1941

MILK USED FOR MAKING DAIRY PRODUCTS IN THE UNITED STATES, SELECTED YEARS, 1930-40



U. S. DEPARTMENT OF AGRICULTURE

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AGRICULTURAL MARKETING SERVICE

BETWEEN 1932 AND 1939 THE QUANTITY OF MILK USED FOR MAKING CHEESE, CONDENSERY PRODUCTS, AND ICE CREAM INCREASED STEADILY. THERE ALSO WAS A MODERATE INCREASE IN THE AMOUNT OF MILK GOING INTO CREAMERY BUTTER BUT THIS WAS LARGELY OFFSET BY DECREASED QUANTITIES USED FOR CHURNING ON FARMS. SINCE LATE IN 1939 THE CHANGES HAVE BEEN MORE RAPID. IN 1941 INCREASES IN THE PRODUCTION OF CHEESE, EVAPORATED MILK AND CONDENSED MILK PROMISE TO INCREASE THE AMOUNT OF MILK USED FOR THESE PURPOSES FULLY 20 PERCENT OVER THE AMOUNT USED IN 1940. EVEN GREATER INCREASES IN THESE PRODUCTS ARE IN PROSPECT FOR 1942. ICE CREAM PRODUCTION INCREASED IN 1941 AND MAY INCREASE FURTHER IN 1942. CREAMERY BUTTER IS INCREASING IN SOME AREAS AND DECREASING IN OTHERS, WITH FURTHER INCREASES LIKELY TO BE SMALL. THE DECREASE IN FARM BUTTER IS EXPECTED TO CONTINUE. THESE CHANGES, DUE LARGELY TO WAR CONDITIONS, ARE CAUSING SHIFTS IN THE REGIONAL AND SEASONAL PRODUCTION PATTERNS FOR THE VARIOUS DAIRY PRODUCTS.

Milk production in November was about 8,280 million pounds, exceeding production in the same month last year by 435 million pounds. But the equivalent of about 642 million pounds of milk was required to produce the nearly 29 million pounds of cheese and the nearly 160 million pounds of evaporated milk purchased during the month by the Government, primarily for export. Thus an increase in milk production, which would have seemed disturbingly large under ordinary conditions, was not quite large enough to meet our new needs. From now on all comparisons of production, stocks, and prices with corresponding statistics for past years will need to be interpreted from a new point of view.

Milk production per cow on December 1 was nearly 5 percent higher than on December 1 last year. Mild weather, a late pasture season, and liberal feeding all helped to maintain production; but the proportion of the cows reported milked, after being low for several months was the highest on record for December 1 in the North Atlantic and North Central groups of States and in the country as a whole. Apparently substantially more than the usual proportion of the cows freshened during November. This tends to support expectations of unusually heavy milk production during the winter months if weather conditions permit.

The quantities of dairy products manufactured continue to show marked regional and seasonal adjustments. With the prices of cheese and condensery products maintained at a relatively high level by Government purchases, a constantly increasing number of farmers who formerly sold cream to creameries are shifting over to selling whole milk. This shifting is necessarily slow because it requires some changes in equipment to meet quality standards and refrigeration needs; it also involves changes in farm organization where the skim milk was an important feed. But, while many farmers who have only a few cows will be slow to make the change, the diversions are becoming increasingly important. They are causing sharp decreases in creamery butter production in most areas where condenseries and cheese factories provide a more favorable market and are causing large percentage increases in cheese and evaporated milk production in some areas where most of the milk was formerly skimmed for butter.

On the basis of incomplete reports, November production compared with production in the same month of last year about as follows: American cheese, an increase of more than 40 percent; all cheese, an increase of 34 percent; evaporated milk, a very large percentage increase, probably much more than the 50 percent increase shown in October; creamery butter, a decrease of 1 or 2 percent. In the week ending December 4 creamery butter production was nearly 12 percent below production in the corresponding week last year in the East North Central States where diversions of milk to other uses are heaviest and was 1 percent above last year in the West North Central States where condenseries and cheese factories can use only a small part of the milk produced. Due, in part, to favorable weather and feed conditions and to the rebuilding of dairy herds that were reduced during the drought years, butter production in most of the States between the Mississippi River and the Rocky Mountains will approach or exceed previous high records this year.

Stocks of dairy products in sight continue large and on December 1 were 83 percent greater than on the same date last year but they include some supplies purchased by the Government for export and not yet shipped. Stocks of butter in cold storage declined about the usual number of pounds during November but on December 1 were still the heaviest on record for the date except for 1938.

Prices of the dairy products that have been supported by large Government purchases have held about steady or increased in recent weeks; the price of butter is about the same as a year ago but has fluctuated somewhat nervously because of the heavy stocks; milk for fluid consumption has shown a little more than the usual seasonal increase. Feed prices and some other cost items are higher than a month ago.

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Dairy Production

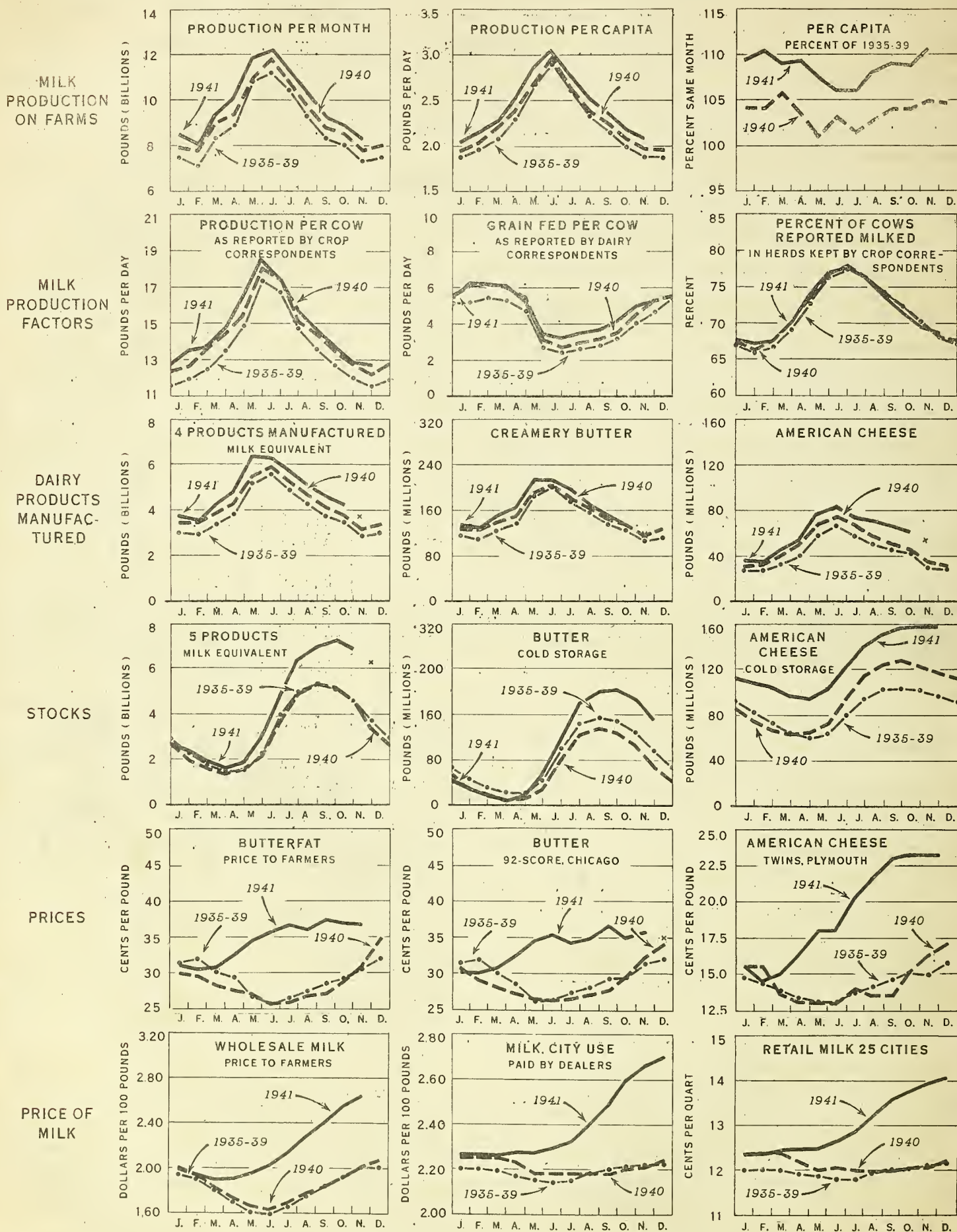
December 15, 1941

SUMMARY OF DAIRY STATISTICS FOR THE UNITED STATES

		Average 1935-39	1940	1941	
				Total or average	Percent of 1940
MILK PRODUCTION ON FARMS:					
Total, per month..... mil.lb.	Sept.	8,338	8,880	9,330 <u>a/</u>	105.1
	Oct.	7,992	8,510	8,928 <u>a/</u>	104.9
	Nov.	7,303	7,845	8,280 <u>a/</u>	105.5
Per capita, daily average..... lb.	Oct.	1.989	2.077	2.165 <u>a/</u>	104.2
	Nov.	1.876	1.977	2.073 <u>a/</u>	104.9
Per cow, per day..... lb.	Oct. 1	12.73	13.40	13.70	102.2
(As reported by crop correspondents)	Nov. 1	11.99	12.74	12.84	100.8
	Dec. 1	11.53	12.17	12.74	104.7
GRAIN FED PER COW	lb. Nov. 1	3.97	4.51	4.95	109.8
(As reported by dairy correspondents)	Dec. 1	4.61	5.22	5.40 <u>c/</u>	103.4
PRODUCTION OF MANUFACTURED DAIRY PRODUCTS:					
Creamery butter, monthly..... mil.lb.	Oct.	126.9	136.8 <u>b/</u>	136.4 <u>b/</u>	99.7
	Nov.	108.1	117.7 <u>b/</u>	115.1 <u>a/</u>	97.8
weekly..... week ending Dec. 4		---	---	---	96.6
American cheese, monthly mil.lb.	Oct.	42.1	47.8 <u>b/</u>	62.2 <u>b/</u>	130.1
	Nov.	30.8	35.9 <u>b/</u>	50.4 <u>a/</u>	140.4
weekly..... week ending Dec. 4		---	---	---	148.7
Evaporated milk, case..... mil.lb.	Sept.	153.3	198.8 <u>b/</u>	282.3 <u>b/</u>	142.0
	Oct.	137.1	172.6 <u>b/</u>	269.3	156.0
4 products, milk equivalent..... mil.lb.	Sept.	3,816	4,202	4,608	109.7
(Creamery butter x 21, all cheese except	Oct.	3,525	3,898	4,258	109.2
skim x 10, canned cond. & evap. milk x 2.2)	Nov.	2,938	3,288	---	114.1 <u>c/</u>
STOCKS ON HAND:					
Butter in cold storage..... mil.lb.	Nov. 1	129.5	105.1	186.6	177.5
(Including government holdings)	Dec. 1	95.5	67.6	152.5	225.6
Commercial holdings, only.....	Dec. 1	70.3	67.5	147.5	218.5
American cheese..... mil.lb.	Nov. 1	102.1	124.8	157.5	126.2
(Cold storage holdings)	Dec. 1	97.3	119.3	158.0	132.4
Evaporated milk, case..... mil.lb.	Oct. 1	253.0	380.5	339.7	89.3
(Manufacturers' stocks)	Nov. 1	249.1	358.2	382.6	106.8
5 products, milk equivalent..... mil.lb.	Oct. 1	5,088	5,245	7,214	137.5
(Butter, all cheese, canned cond. & evap.	Nov. 1	4,637	4,631	6,948	150.0
milk plus cream in cold storage)	Dec. 1	3,747	3,437	6,284 <u>c/</u>	182.8
PRICES:					
Butterfat, per pound..... ct.	Oct. 15	29.2	28.8	36.9	128.1
(Prices received by farmers)	Nov. 15	30.5	31.0 <u>b/</u>	36.7	118.4
Butter, wholesale, per pound..... ct.	Nov.	31.42	32.43	35.75	110.2
(92 score, Chicago)	Dec.	32.09	34.20	35.00 <u>d/</u>	102.3
American cheese, wholesale, per pound..... ct.	Nov. 15	14.90	16.25	23.25	143.1
(Twins, Plymouth, Wisconsin)	Dec. 15	15.70	17.00	23.25	136.8
Milk, wholesale, per 100 pounds..... dol.	Oct. 15	1.92	1.91	2.55 <u>b/</u>	133.5
(All purposes, prices received by farmers)	Nov. 15	2.01	2.03 <u>b/</u>	2.64 <u>a/</u>	130.0
Milk for city distribution, per 100 lbs. dol.	Nov.	2.22	2.21	2.66	120.4
(Prices paid by dealers, 3.5% basis)	Dec.	2.23	2.24	2.70 <u>a/</u>	120.5
Milk, retail, delivered, per quart..... ct.	Nov.	12.11	12.05	13.94	115.7
(Average, 25 markets)	Dec.	12.16	12.21	14.06 <u>a/</u>	115.2

a/ Preliminary. b/ Preliminary revision. c/ Forecast or interpolation. d/ Price December 13.

DAIRY STATISTICS: GRAPHIC SUMMARY FOR THE UNITED STATES



* APPROXIMATION BASED ON INFORMATION AVAILABLE TO ABOUT 12TH OF CURRENT MONTH

MILK PRODUCTION ON FARMS

Milk production declined less rapidly than usual during November. Total production of milk on farms during the month was estimated at nearly 8.3 billion pounds, 6 percent higher than in the same month a year ago and 18 percent above production in November 1935, the lowest for the month in the preceding decade. Factors contributing to the heavy milk flow were more milk cows on farms, unusually mild late fall weather, liberal supplemental feeding of milk cows, and a somewhat early seasonal upturn in freshenings. Daily average production per capita in November averaged 2.07 pounds, about 4 percent higher than in 1931, the previous high for November so far as records are available.

MONTHLY MILK PRODUCTION ON FARMS, UNITED STATES 1935-39 Average, 1940, and 1941

Month	Monthly Total			Daily Average per Capita		
	Average	1940	1941	Average	1940	1941
	1935-39	1940	1941	1935-39	1940	1941
	Million pounds			Pct.	Pounds	
January	7,480	7,952	8,443	106	1.871	2.058
February	7,124	7,801	8,008	103	1.957	2.159
March	8,342	9,006	9,331	104	2.084	2.271
April	8,928	9,444	10,020	106	2.304	2.519
May	10,719	11,076	11,826	107	2.676	2.876
June	11,195	11,805	12,180	103	2.886	3.059
July	10,443	10,865	11,362	105	2.604	2.760
August	9,330	9,812	10,385	106	2.325	2.521
September	8,338	8,880	9,530	105	2.145	2.339
October	7,992	8,510	8,928	105	1.989	2.165
November	7,303	7,845	8,280	106	1.876	2.073
Jan.-Nov. Incl.	97,194	102,996	108,098	105.0	2.249	2.438
December	7,516	8,076	--	--	1.868	1.968
Yearly Total	104,710	111,072	--	--	2.216	2.301

Milk production per cow on December 1 was 10 percent or more above the 1930-39 average for the date in all major groups of States except the South Central. In the northern and northeastern commercial dairy States, previous high records for December 1 were eclipsed, with averages in New England, all the Great Lake States, Iowa, and a few less important dairy States the highest for the date in 17 years. In most of this northern dairy region, the usual November decline in percentage of milk cows in production was much less than usual. More than the usual number of cows and heifers appear to have freshened in the late fall months this year and probably there has been some tendency for farmers to milk strippers a little longer than usual, in response to unusually mild weather and good milk prices. In the South Central States, however, the percentage of milk cows reported milked was generally below average; and in several States west of the Mississippi the reported December 1 production per cow was among the lowest of recent years.

For the country as a whole, December 1 milk production per cow in herds kept by crop correspondents averaged 12.74 pounds, compared with 12.17 last year and a 1930-39 average of 11.50 pounds for December 1. In these herds 68.7 percent of the milk cows were reported milked, the highest percentage for December 1 in the 17-year record.

GRAINS AND CONCENTRATES FED TO MILK COWS.

Despite unusually mild weather, farmers were supplying their milk cows liberally with grain and concentrated feedstuffs. Both in herds kept by dairy correspondents, whose reports tend to reflect conditions on commercial dairy farms, and in herds kept by crop correspondents who lean more heavily toward general type farming, milk cows in December were being fed more grain per head than on that date last year and around 16 to 17 percent heavier than at the same season in the 1935-39 period.

As compared with averages of crop correspondents' reports for December 1 in the 1935-39 period, the greatest regional increases in rate of feeding this year were apparent in the West North Central and Western States. (See table on page 7). In the former group of States the quantity of grain fed per cow on December 1 equalled that a year ago and was well above any previous figure in a record dating back to 1933. Most farmers in this area have available abundant supplies of feed grains, especially corn, for feeding their milk cows. In the Western group of States where normally less grain is fed in relation to milk produced than in any other section of the country, the December 1 rate of feeding was materially stepped up this year, being nearly a fourth greater than a year ago and about a third above the average rate.

In Wisconsin, where factory facilities for converting whole milk into manufactured products are most numerous, keen competition has developed for available milk supplies, and on December 1 farmers were endeavoring to increase production by feeding their milk cows a third more grain per head than the average during the 1935-39 period. In New England, New York, New Jersey, and Pennsylvania, the rate of December 1 feeding this year was well above that a year ago and higher than previously reported in the 9-year period for which records are available. In the South the rate of feeding was generally about as heavy as a year ago, but in Southern States west of the Mississippi, particularly those with wheat pasturage available, milk cows were fed at only about an average rate.

GRAIN AND CONCENTRATES FED PER MILK COW PER DAY IN HERDS KEPT BY DAIRY CORRESPONDENTS

On First of Each Month, United States, 1931-41 1/

Year:	Jan. 1:	Feb. 1:	Mar. 1:	Apr. 1:	May 1:	June 1:	Jul. 1:	Aug. 1:	Sept. 1:	Oct. 1:	Nov. 1:	Dec. 1:	1/2 Year:
Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1931	5.67	5.71	5.96	6.05	5.20	2.99	2.37	2.37	2.78	3.39	4.22	5.05	4.31
1932	5.51	5.55	5.58	5.48	4.80	2.64	2.11	2.22	2.45	3.10	4.11	4.84	4.03
1933	5.55	5.65	5.76	5.74	4.92	2.77	2.41	2.55	2.49	2.73	3.55	4.18	3.99
1934	4.73	4.74	4.90	4.89	4.31	2.56	2.22	2.34	2.36	2.52	3.01	3.57	3.49
1935	4.25	4.29	4.50	4.39	3.99	2.13	1.86	1.96	2.19	2.55	3.44	4.26	3.36
1936	5.33	5.40	5.56	5.45	5.02	2.96	2.76	3.02	3.09	3.19	3.56	4.11	4.10
1937	4.80	4.91	4.94	4.91	4.34	2.47	2.15	2.33	2.62	3.22	4.06	4.73	3.82
1938	5.53	5.74	5.85	5.75	4.88	2.88	2.62	2.75	2.95	3.40	4.18	4.90	4.29
1939	5.66	5.86	5.98	5.92	5.15	2.95	2.56	2.80	3.03	3.60	4.61	5.03	4.42
1940	5.51	6.13	6.18	6.02	5.43	3.15	2.73	2.98	3.15	3.54	4.51	5.22	4.56
1941	5.91	6.18	6.23	6.08	5.26	3.47	3.23	3.53	3.71	4.12	4.95	5.40	4.85

1/ Based on periodic replies of about 6,000 dairy correspondents to the question "How many pounds of grain (including mill feeds and concentrates) were fed yesterday to all milk cows on your farm?" Since December 1933 the series is based on quarterly reports (Feb. 1, May 1, Aug. 1 and Nov. 1) from all States, with intervening months interpolated using monthly reports from 10 or more States where dairying is relatively important.

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

December 15, 1941

"GRAIN" FED AND MILK PRODUCED PER MILK COW IN HERDS KEPT BY REPORTERS 1/							
: "Grain" Fed per Milk Cow 2/				: Milk Produced per Milk Cow 3/			
: Dec. 1 Av.: Dec. 1		: Dec. 1	: Dec. 1	: Dec. 1 Av.: Dec. 1		: Dec. 1	: Dec. 1
: 1935-39		: 1940	: 1941	: 1935-39		: 1939	: 1940
		Pounds				Pounds	
Me.	4.3	4.6	5.3	12.0	11.8	12.9	13.4
N.H.	4.2	4.5	4.8	14.3	13.4	14.0	15.0
Vt.	4.2	4.3	5.2	12.5	13.1	12.6	13.4
Mass.	6.2	6.5	6.4	16.7	17.6	17.5	17.5
Conn.	5.7	5.7	6.3	15.7	17.0	16.8	17.8
N.Y.	4.9	5.4	6.0	14.7	15.3	15.0	16.8
N.J.	7.1	7.1	7.9	17.6	13.7	18.1	19.5
Pa.	6.0	5.9	6.6	14.8	14.9	15.4	16.2
N. ATL.	5.2	5.4	6.0	14.78	15.17	15.33	16.54
Ohio	5.5	5.7	5.6	13.1	13.7	13.2	14.3
Ind.	5.2	5.5	5.5	12.1	13.0	12.8	13.4
Ill.	5.2	5.9	5.8	12.6	13.3	13.7	13.7
Mich.	4.8	5.1	5.4	14.7	16.0	15.4	16.5
Wis.	3.6	4.4	4.8	12.9	13.5	13.8	14.7
E.N. CENT.	4.3	5.2	5.3	13.02	13.74	13.83	14.55
Minn.	3.7	4.7	4.4	12.8	13.6	14.4	14.8
Iowa	5.0	5.3	5.9	12.0	13.0	13.0	13.1
Mo.	3.5	3.9	4.1	8.5	8.3	8.8	9.7
N. Dak.	2.6	3.5	3.6	8.8	9.4	10.7	11.2
S. Dak.	2.3	3.4	3.1	9.0	9.7	9.8	10.8
Nebr.	3.2	3.3	4.1	11.2	11.8	11.8	12.7
Kans.	3.3	4.1	4.6	12.0	12.1	12.2	12.9
W.N. CENT.	3.6	4.5	4.5	10.33	11.44	11.79	12.29
Md.	5.7	6.0	6.0	13.5	14.6	15.2	14.2
Va.	3.9	4.5	4.7	9.8	10.0	11.1	12.2
W. Va.	3.3	3.6	3.8	9.5	9.6	10.1	10.0
N. C.	4.2	4.8	4.5	10.3	11.0	11.2	11.1
S. C.	3.3	3.1	3.3	9.6	10.6	9.5	10.2
Ga.	2.9	3.6	3.2	8.2	9.0	9.0	8.4
S. ATL.	3.8	4.2	4.2	9.91	10.52	10.98	11.13
Ky.	5.1	5.4	5.4	9.7	9.9	10.0	10.7
Tenn.	3.9	4.2	4.2	8.4	8.9	8.8	8.8
Ala.	4.0	3.8	5.0	7.5	7.8	7.8	7.9
Miss.	2.2	1.6	2.1	6.3	5.7	5.6	6.4
Ark.	3.0	3.1	3.2	7.1	7.6	7.1	7.4
Okla.	2.9	3.6	3.2	9.0	8.9	8.4	8.5
Tex.	3.1	3.6	2.8	8.0	8.3	7.2	7.5
S. CENT.	3.3	3.5	3.4	8.08	8.12	7.83	8.18
Mont.	2.3	2.8	4.3	11.3	13.7	13.5	12.5
Idaho	2.3	2.3	2.9	15.1	16.5	15.7	15.4
Wyo.	1.8	1.8	2.0	10.6	11.4	11.0	10.9
Colo.	2.7	3.7	3.6	11.8	14.5	13.3	14.6
Wash.	4.0	3.9	4.4	14.7	15.3	15.9	16.0
Oreg.	3.5	3.1	3.8	13.6	14.2	13.5	14.0
Calif.	2.9	2.8	4.2	16.4	18.4	17.1	16.8
WEST.	2.9	3.1	3.8	13.48	15.08	14.69	15.10
U. S.	3.95	4.44	4.60	11.50	12.09	12.17	12.74

1/ Figures for New England States are based on combined returns from Crop and Special Dairy reporters. Figures for other States, regions, and U. S. are based on returns from Crop reporters only. The regional averages are based in part on records of less important dairy States not shown separately. 2/ Averages per cow computed from reported "Pounds of grain and concentrates fed yesterday to milk cows on your farm (or ranch)". 3/ Averages represent the reported daily milk production of herds kept by reporters divided by the total number of milk cows (in milk or dry) in these herds.

CHANGES IN THE PRODUCTION OF MANUFACTURED DAIRY PRODUCTS

War requirements now dominate the production of dairy products. Thus in October and November the quantity of evaporated milk purchased by the Government, primarily for export, was greater than the total amount of evaporated milk produced in those 2 months last year. In the same 2 months purchases of American cheese were equal to more than two-thirds as much as was produced in the United States in the corresponding months last year. Even if production of evaporated milk in November this year were nearly twice as great as in the same month of last year, and American cheese production were fully 40 percent greater than a year ago, as indicated by incomplete reports, these outstanding increases would still leave less of these products for domestic consumption. Further increases are needed. In addition a large increase in dry skim milk production is called for and the price has been rising rapidly. In October it averaged 72 percent higher than at the same season last year.

Milk production is being pushed about as fast as is practicable and at increasing cost. Dairy herds are being increased and part of the increase is being obtained by keeping low-producing cows that would ordinarily be culled. The quantity of grain fed per cow on December 1 was the highest for the date that has been reported. Production per cow on December 1 was nearly 5 percent higher than on that date last year and more than 5 percent higher than on the same date in any of the previous 15 years for which records are available. Yet to supply Britain's requirements we shall need to produce even more milk or else curtail our own consumption of some dairy products. We shall probably do both.

In recent months cheese factories and condenseries have been obtaining an increasing proportion of the milk used for manufacturing purposes. As the seasonal decline in deliveries left them with some otherwise unused plant capacity they have been able to outbid creameries for the local milk supply because prices of both cheese and evaporated milk are about a third higher than a year ago while the price of butter shows practically no increase. In May, when the prices of the several dairy products were in about their usual relation to each other, creamery butter production was about 12 percent above production in the month last year. By the week ending December 11 it had dropped to 6 percent below production in the same week last year, and reports from the East North Central States show a reduction there of 18 percent. Due to the delays and difficulties of establishing new dairy plants in wartime to meet a temporary need, and to the time required to develop an adequate supply of quality milk in areas where many of the herds are small and farmers are accustomed to selling cream, the only way to secure the needed supply of cheese and condensary products immediately was to make full use of existing plants. Although construction of new plants is to be expected it looks as though most American cheese factories and condenseries would be busy "for the duration".

The trend of creamery butter production appears to depend largely on the rate of domestic consumption, for stocks are more than 50 percent larger than usual for this season of the year and about equal to the quantity usually consumed per month. Since late in June, (after the sharp increase in the price of butter) the consumption of creamery butter, while probably fully up to average, appears to have dropped below consumption in the same months of last year. Until export and import statistics are available for publication this assumption cannot be verified, but even in November, when the wholesale price was only about 10 percent higher than in 1940, consumption appeared to have been several percent less. The wholesale price is now about the same as a year ago. Under these conditions it seems probable that butter production will continue low this winter where there are opportunities to divert the milk.